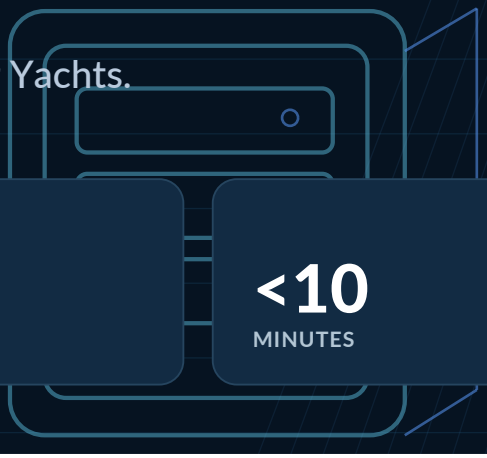
LiVAULT
SAFE STORAGE AND CHARGING OF LITHIUM BATTERIES

MARINE SAFETY / FIELD ASSESSMENT

BATTERY SAFETY SCORECARD

Onboard Lithium-Ion Risk Assessment for Yachts.



25	05	<10
ASSESSMENT CHECKS	SAFETY AREAS	MINUTES

HOW TO USE THIS SCORECARD

01 Answer all 25 questions based on current vessel, office or laboratory practices.

02 Enter 0, 1 or 2 points for each response.

03 Add section totals and compare your overall result with the rating guide.

VESSEL / LOCATION	COMPLETED BY	DATE

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SECTION 01 / FIVE SAFETY CHECKS

Storage & Containment

How and where lithium-ion batteries are stored when not in use.

SCORE EACH CHECK: 0 = NOT MET 1 = PARTIALLY MET 2 = MET

1.1 Are lithium-ion batteries (including water toys, e-foils, seabobs, laptops, tools) stored in a designated, clearly labelled location?

SCORE

0	No dedicated area	1	Informal area, not labelled	2	Dedicated, labelled zone

1.2 Is storage separated from flammable materials, fabrics or enclosed wooden cabinetry?

SCORE

0	No separation	1	Some separation	2	Fully separated, fireproof surroundings

1.3 Are batteries stored in a certified containment system (e.g. RAMBSS/RACLAN or equivalent)?

SCORE

0	No containment	1	Basic fireproof bag only	2	Certified containment unit (TÜV/Lloyd's verified)

1.4 Are damaged, swollen or recalled batteries removed from storage immediately?

SCORE

0	No process exists	1	Ad hoc removal	2	Formal inspection and removal protocol

1.5 Is the storage location ventilated to prevent toxic gas build-up?

SCORE

0	No ventilation	1	Partial ventilation	2	Active or passive venting to outside

SECTION 1 TOTAL Add your five scores (maximum 10). / 10

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SECTION 02 / FIVE SAFETY CHECKS

Charging Practices

How batteries are charged and supervised.

SCORE EACH CHECK: 0 = NOT MET 1 = PARTIALLY MET 2 = MET

2.1 Are batteries charged using the manufacturer-approved charger only? SCORE

0	1	2
Unknown/mixed chargers	Mostly correct	Always manufacturer-approved

2.2 Is charging supervised or monitored at all times? SCORE

0	1	2
Unattended overnight regularly	Occasionally unattended	Always supervised or smart-monitored

2.3 Are batteries charged inside a certified containment unit or on a fire-resistant surface? SCORE

0	1	2
Open surface, no protection	Fire-resistant mat	Inside certified containment

2.4 Is charging stopped and disconnected when batteries reach 100% charge? SCORE

0	1	2
No - left on charge indefinitely	Manually when remembered	Automatic cut-off or smart charger

2.5 Are batteries allowed to cool before charging after heavy use? SCORE

0	1	2
No cooling period	Sometimes	Always, per documented procedure

SECTION 2 TOTAL Add your five scores (maximum 10). / 10

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SECTION 03 / FIVE SAFETY CHECKS

Detection & Response

Fire and gas detection, alarm systems, and emergency response readiness.

SCORE EACH CHECK: 0 = NOT MET 1 = PARTIALLY MET 2 = MET

3.1 **Is there a smoke or thermal runaway detector fitted near the battery storage/charging area?** SCORE

0	No detector	1	General smoke alarm only	2	Dedicated Li-ion thermal/gas detector

3.2 **Is there a fire suppression system (extinguisher, suppression agent) immediately accessible?** SCORE

0	None within reach	1	Standard CO2 extinguisher nearby	2	Suitable Li-ion suppression agent on hand

3.3 **Do all relevant personnel know the emergency response procedure for a battery fire?** SCORE

0	No procedure exists	1	Procedure exists but not communicated	2	All staff trained, procedure displayed

3.4 **Is there a safe containment option for a burning or venting battery (e.g. immersion bucket, containment bag)?** SCORE

0	Nothing available	1	Basic option available	2	Certified containment (RAMBSS/RACLAN) on hand

3.5 **Is there a written incident log for any battery anomalies (swelling, heat, sparking)?** SCORE

0	No log	1	Informal notes	2	Formal log, reviewed regularly

SECTION 3 TOTAL Add your five scores (maximum 10). / 10

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SECTION 04 / FIVE SAFETY CHECKS

Compliance & Certification

Regulatory alignment and documentation.

SCORE EACH CHECK: 0 = NOT MET 1 = PARTIALLY MET 2 = MET

4.1 Are you aware of the applicable regulations for your context (e.g. MGN 681 for vessels)? SCORE

0	1	2
Not aware	Partially aware	Fully aware and actively compliant

4.2 Are your battery containment solutions certified by a recognised body (TÜV Nord, Lloyd's Register, DMT)? SCORE

0	1	2
No certification	In progress	Certified and documented

4.3 Has an independent third-party safety review or risk assessment been completed in the last 12 months? SCORE

0	1	2
Never completed	Over 12 months ago	Completed within last 12 months

4.4 Do your insurance documents and safety certificates reflect current battery storage arrangements? SCORE

0	1	2
No, not updated	Partially updated	Fully updated and filed

4.5 Are crew members, lab staff or office personnel trained in Li-ion battery safety at least annually? SCORE

0	1	2
No training	Informal/one-off	Annual certified training

SECTION 4 TOTAL Add your five scores (maximum 10). / 10

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SECTION 05 / FIVE SAFETY CHECKS

Environment & Infrastructure

Physical environment suitability for safe battery use.

SCORE EACH CHECK: 0 = NOT MET 1 = PARTIALLY MET 2 = MET

5.1 Is the battery storage area protected from extreme temperatures (heat, direct sun) and humidity?

SCORE

0	Regularly exposed	1	Sometimes exposed	2	Always protected

5.2 Is wiring and cabling associated with battery systems inspected regularly for damage or corrosion?

SCORE

0	Never inspected	1	Informally checked	2	Formal inspection schedule

5.3 Are batteries protected from mechanical impact, vibration or water ingress in transit and storage?

SCORE

0	No protection	1	Basic protection	2	Certified transit/storage cases

5.4 Is the battery inventory (type, quantity, age, condition) documented and kept up to date?

SCORE

0	No inventory	1	Partial list	2	Full inventory, regularly updated

5.5 Is there a clear disposal and recycling procedure for end-of-life batteries?

SCORE

0	None	1	Ad hoc	2	Documented, compliant process

SECTION 5 TOTAL Add your five scores (maximum 10). / 10

YOUR RESULTS

Your score, at a glance.

Add your five section scores to calculate your result out of 50.

ASSESSMENT AREA	SCORE
01 Storage & Containment	/10
02 Charging Practices	/10
03 Detection & Response	/10
04 Compliance & Certification	/10
05 Environment & Infrastructure	/10
TOTAL SCORE	/50

RISK RATING

41-50	LOW RISK	Strong practices in place. Maintain standards and review annually.
31-40	MODERATE RISK	Good foundation, but identifiable gaps that should be addressed within 3 months.
21-30	ELEVATED RISK	Several critical gaps. Immediate action recommended on lowest-scoring sections.
11-20	HIGH RISK	Significant exposure. Professional safety assessment and urgent remediation required.
0-10	CRITICAL	Immediate risk. Do not continue operating without expert intervention.

Use this indicative score to prioritise further review - not as a formal safety certification.

FROM RESULTS TO ACTION

Close the safety gaps.

If you scored 0-4 in any section, the scorecard recommends:

01 **Storage & Containment**
Install a certified RAMBSS or RACLAN containment unit immediately; review storage location.

02 **Charging Practices**
Introduce a charging protocol document; upgrade to smart chargers with auto cut-off.

03 **Detection & Response**
Fit a dedicated thermal/gas detector; acquire Li-ion appropriate suppression equipment; run a drill.

04 **Compliance & Certification**
Book an independent audit; review insurance policy wording.

05 **Environment & Infrastructure**
Conduct a full infrastructure inspection; start a battery inventory today.

BOOK YOUR FREE EXPERT ASSESSMENT

LiVAULT offers a complimentary onsite or remote Battery Safety Review for vessels.

- Review your scorecard and identify two or three highest-priority actions
- Recommend a suitable RAMBSS or RACLAN solution for your context
- Written summary for your captain, facilities team, insurance broker or management company

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PALMA DE MALLORCA

This scorecard is an indicative self-assessment tool and does not replace a full professional risk audit. Results should guide improvement actions and informed conversations with safety professionals.